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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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| Serial No. 10/617,012 | Customer No. 23379 |
| Applicant: Alexander N. Glazer et al. | Confirmation No. 3078 |
| Filed: Jul 10, 2003 | Group Art Unit: 1656 |
| Docket No. B00-016-3 | Examiner: Kam, Chih Min |
| Title: Multifunctional Recombinant Phycobiliprotein-Based Fluorescent Constructs and Phycobilisome Display | CERTIFICATE OF TRANSMISSION I hereby certify that this corr is being transmitted by facsimile to the Comm for Patents 571-273-0948 on February 17, 2007. Signed 2/22/07 Richard Aron Osman |

REQUEST FOR CERTIFICATE OF CORRECTION UNDER 37 CFR 1.322

Mail Stop CERTIFICATE OF CORRECTION
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Commissioner:

The Assignee of this Patent requests that the Commissioner issue a certificate of correction in this Patent. The Office erroneously neglected to print the authorized Examiner's amendments of the Notice of Allowability dated Nov 03, 2006 (p.2-4, attached). In particular, the Examiner amended the specification and claims 1, 5, 7 and 15 as shown on the attached PTO/SB44.

Accordingly, please correct the Patent cover sheet as indicated on the attached Form PTO/SB/44. This correction includes no new matter.

Respectfully submitted,
Science & Technology Law Group

Richard Aron Osman, J.D., Ph.D., Reg. No. 36,627
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enc. Notice Allowability dated 11-03-06, p.2-4
PTO/SB44 (1p)

PTO/SB/44 (04-05)
Approved for use through 04/30/2007. OMB 0651-0033
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

(Also Form PTO-1050)

# UNITED STATES PATENT AND TRADEMARK OFFICE
## CERTIFICATE OF CORRECTION



PATENT NO. : 7,176,000

APPLICATION NO.: 10/617,012

ISSUE DATE : Feb 13, 2007

INVENTOR(S) : Alexander N. Glazer, Yuping Cai

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

At Col.1, lines 9-12, replace the para. "This application ... by reference" with the following:
--This application is a divisional of and claims priority under 35 U.S.C.§ 120 to U.S. Serial No. 09/469,194, filed December 21, 1999, now U.S. Patent 6,649,376, having the same title and inventors, which is incorporated herein by reference.--

At col.49, line 1 - col.50, line 51, replace claims 1, 5, 7 and 15 with the following revised claims 1, 5, 7 and 15:
--1. A composition comprising a fusion protein comprising a functional displayed domain and a functional phycobiliprotein domain incorporated in a functional oligomeric phycobiliprotein, wherein the oligomeric phycobiliprotein provides a fluorescent tag, and wherein the fusion protein further comprises in addition to the functional displayed domain (a) a specific binding moiety selected from a streptavidin biotin-binding moiety, a biotinylated or biotinylatable moiety, and an antigen binding immunoglobulin moiety; or (b) a protease cleavage site between the displayed domain and the phycobiliprotein domain.--

--5. The composition of claim 1 wherein the fusion protein comprises a specific binding moiety selected from a streptavidin biotin-binding moiety, a biotinylated or biotinylatable moiety, and an antigen binding immunoglobulin moiety.--

--7. The composition of claim 1 wherein the fusion protein comprises a protease cleavage site between the displayed domain and the phycobiliprotein domain.--

--15. A method for making the fusion protein of the composition of claim 1, the method comprising the steps of:
providing a nucleic acid encoding a polypeptide comprising a functional displayed domain and a functional phycobiliprotein domain and a specific binding moiety selected from a streptavidin biotin-binding moiety, a biotinylated or biotinylatable moiety, and an antigen binding immunoglobulin moiety, or a protease cleavage site between the displayed domain and the phycobiliprotein domain;
making the polypeptide by expressing the nucleic acid in a cell or cell-free expression system; and
combining the polypeptide with a phycobiliprotein subunit under conditions to form the fusion protein.--

MAILING ADDRESS OF SENDER (Please do not use customer number below):

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San Clemente, CA 92672

## DETAILED ACTION

### *Status of the Claims*

1. Claims 1-22 are pending.

Applicants' amendment filed August 22, 2006 is acknowledged. Applicants' response has been fully considered. Claims 1 and 5-7 have been amended. Therefore, claims 1-22 are examined.

### *Withdrawn Claim Rejections - 35 USC § 101*

2. The previous rejection of claims 15-18 under 35 U.S.C. 101 as claiming the same invention as that of claims 11-14 of U.S. Patent 6,649,376, is withdrawn in view of applicants' amendment to the claim, and applicants' response at page 5 in the amendment filed August 22, 2006.

### *Withdrawn Claim Rejections - 35 USC § 112*

3. The previous rejection of claims 5-7 under 35 U.S.C. 112, second paragraph, is withdrawn in view of applicants' amendment to the claim, and applicants' response at page 5 in the amendment filed August 22, 2006.

## *Examiner's Amendment*

An **Examiner's Amendment** to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Richard Osman on November 3, 2006.

**Examiner's Amendment to the Specification:**

Please replace the paragraph at page 1, lines 10-13 with the following paragraph:

This application is a divisional of and claims priority under 35 U.S.C.§ 120 to U.S. Serial No. 09/469,194, filed December 21, 1999, now U.S. Patent 6,649,376, having the same title and inventors, which is incorporated herein by reference.

**Examiner's Amendment to the Claims:**

Claims 1, 5, 7 and 15 have been amended as follows:

1. (Currently amended) A composition comprising a fusion protein comprising a functional displayed domain and a functional phycobiliprotein domain incorporated in a functional oligomeric phycobiliprotein, wherein the oligomeric phycobiliprotein provides a fluorescent tag, and wherein the fusion protein further comprises in addition to the functional displayed domain (a) a specific binding moiety selected from a streptavidin biotin-binding moiety, a biotinylated or biotinylatable moiety, and an antigen binding immunoglobulin moiety; or (b) a protease cleavage site between the displayed domain and the phycobiliprotein domain.

5. (Currently amended) The composition of claim 1 wherein the fusion protein ~~further~~ comprises a specific binding moiety selected from a streptavidin biotin-binding moiety, a biotinylated or biotinylatable moiety, and an antigen binding immunoglobulin moiety.

7. (Currently amended) The composition of claim 1 wherein the fusion protein ~~further~~ comprises a protease cleavage site between the displayed domain and the phycobiliprotein domain.

15. (Currently amended) A method for making the fusion protein of the composition of claim l, the method comprising the steps of:

providing a nucleic acid encoding a polypeptide comprising a functional displayed domain, ~~and~~ a functional phycobiliprotein domain and a specific binding moiety selected from a streptavidin biotin-binding moiety, a biotinylated or biotinylatable moiety, and an antigen binding immunoglobulin moiety, or a protease cleavage site between the displayed domain and the phycobiliprotein domain;

making the polypeptide by expressing the nucleic acid in a cell or cell-free expression system; and

combining the polypeptide with a phycobiliprotein subunit under conditions to form the fusion protein.

**The following is an Examiner's Statement of Reasons for Allowance:** The following references appears to be the closest art to the claimed invention. Colleen Mary Toole (Dissertation; UMI microfilm 9839498, available on December 14, 1998) teaches the construction and expression of the CpcB strep-tag protein incorporated in a phycobilisome assembly in *E.coli*. However, the reference does not teach a composition comprising a fusion protein comprising a functional displayed domain and a functional phycobiliprotein domain incorporated in a functional oligomeric phycobiliprotein, where the fusion protein further comprises a specific binding moiety of a streptavidin biotin-binding moiety, a biotinylated or biotinylatable moiety, or an antigen binding immunoglobulin moiety in addition to the functional displayed domain. Glazer et al. (U.S. Patent 6,649,376) teach a fusion protein comprising a functional displayed domain and a functional phycobiliprotein domain incorporated in a functional oligomeric phycobiliprotein; and a terminal disclaimer over the patent has been filed. Therefore, the claims are allowable over the art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Min Kam whose telephone number is (571) 272-0948. The examiner can normally be reached on 8.00-4:30, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathleen Kerr can be reached at 571-272-0931. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.